

REMARKS

Claims 1-16 are pending in this application. Claim 1 is an independent claim. Claims 1, 5 and 13 are amended. Claims 17-27 were previously withdrawn. Reconsideration and allowance of the present application are respectfully requested.

Entry of Amendment After Final Rejection

Entry of the Amendment is requested under 37 C.F.R. § 1.116 because the Amendment: a) places the application in condition for allowance for the reasons discussed herein; b) does not present any additional claims without canceling the corresponding number of final rejected claims; and/or c) places the application in better form for an appeal, if an appeal is necessary. Entry of the Amendment is thus respectfully requested.

Claim Rejections under 35 U.S.C. §112

Claims 1, 3-13, 15 and 16 stand rejected under 35 USC §112, second paragraph, as being indefinite. Claims 1, 5 and 13 have been amended to overcome the rejection. Therefore, Applicants respectfully request that the rejections of claims 1, 3-13, 15 and 16 under 35 U.S.C. §112 be withdrawn.

Claim Rejections under 35 U.S.C. §102

Claims 1-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,749,021 to Burgess (hereinafter “Burgess”), U.S. Patent No. 2,564,695 to Johnson (hereinafter “Johnson”), U.S. Patent No. 4,614,157 to Grelle (hereinafter “Grelle”) and U.S. Patent No. 4,187,271 to Rolston (hereinafter “Rolston”). This rejection is respectfully traversed.

As noted in the previous Response, Burgess discloses a method of manufacturing a metal-plated cartridge case wherein a thermo plastic resin combined with a two-stage thermosetting resin are molded into a cartridge case blank, taking care not to achieve a permanent set. The blank is then molded into a cartridge case, preferably by compressing the extractor area and blow-molding the remainder of the cartridge case. Alternatively, the blank may be formed by extrusion or resin solvent solution impregnation of a sleeve reinforcement. In

either case, the finished molded cartridge case is then metal plated to the required thickness of metal. See at least Col. 2, lines 49-67 of Burgess.

Johnson discloses a cartridge case made of plastic or a fabric reinforcement, and a method of making the same. See at least Col. 1, lines 1-3 of Johnson.

Grelle discloses that an all-plastic polyethylene cartridge case has a hard-plastic rim and a soft-plastic glass-filled high density polyethylene basewad. The basewad is of a plastic similar to but stronger and tougher than that of the shotshell tube while the rim is of a hard plastic which is chemically dissimilar to the tube. The rim is mechanically locked to the tough basewad and the basewad is chemically bonded to the tube. Also disclosed is a two-step method for molding such a shell with a triple plastic head. Either the rim or the basewad is molded first and the other of the two is molded through the first. See at least the Abstract of Grelle.

Rolston discloses a method of making a casing reinforced by a stretchable glass fiber preform. The casing may be reinforced by metal or a glass fiber mat which is shaped to provide positive engagement with the stretchable fiber preform before its impregnation by a matrix-forming resin. See at least the Abstract of Rolston.

Applicants note that although the Office Action indicated in the "Response to Arguments" Section, that Applicants' arguments are moot in view of new grounds of rejection, the rejection of claims 1-14 under 35 U.S.C. §102(b) is the same as the rejection made in the previous Office Action. Furthermore, the Office Action provides no arguments to rebut Applicants' arguments made in the previous Response.

Thus, Applicants continue to submit that none of Burgess, Johnson or Rolston teaches or suggests each of the elements recited in claims 1 and 3-13. Claim 1, upon which claims 3-13 depend, recites firing device (5) comprising "an electric connection (19) by means of which the ammunition round (1) is in electric contact with the weapon." Claim 1 also recites that the "cartridge case (2) comprises a load-bearing case shell (11) in the form of a cartridge case (2) manufactured from an electrically conductive metal of which at least one inner or outer coating, surface or layer (12,13) is of dielectric material for the electric insulation of the cartridge case (2) in relation to the barrel (14)." None of Burgess, Johnson, Grelle or Rolston teaches or suggests these features.

Burgess discloses a metal-plated plastic cartridge case. The teachings of Burgess are completely opposite from the teachings of the present invention, as recited in the pending claims. Burgess took a plastic case and made it electrically conductive. Fig 5 shows and Col. 8, line 67-Col. 9, line 3 of Burgess discloses that “a plastic coating may be overlaid on the first metal skin so that a smooth transition surface is provided.” (underlining added) There is no teaching or suggestion in Burgess of the firing device (5) and cartridge case (2), as recited in claim 1.

In fact, Burgess discloses a cartridge case designed to be light and have high strength by building up the cartridge case with plastic and metallic materials and dimensioning the layers in dependence on the forces to be subjected to the respective sections of the cartridge case. As noted in the present application in connection to ETC cannons, there is a risk of short circuiting between the cartridge case and the barrel or between the cartridge case and the rest of the ammunition round. The pending claims therefore recite “wherein the casing (10) including the bottom or the bottom piece (16) comprises one or more insulated or insulating shells, layers or surfaces (11, 12, 13) for, at least electrically, insulating both the casing (10) of the cartridge case (2) and its bottom or bottom piece (16) from the rest of the ammunition round (1) including its firing device (5) when the round (1) is stored and handled and, when the round (1) is used, from a barrel (14) of the weapon system.” The pending claims further recite “wherein the casing (10) of the cartridge case (2) comprises a load-bearing case shell (11) in the form of a cartridge case (2) manufactured from an electrically conductive metal of which at least one inner or outer coating, surface or layer (12,13) is of dielectric material for the electric insulation of the cartridge case (2) in relation to the barrel (14) and also to the rest of the ammunition round (1) including the firing device (5) and the ammunition round (1).”

As noted above, Fig 5 of Burgess shows a cartridge that is not insulated as recited in the pending claims. The cartridge case of Burgess is provided with a metal skin 66 on the outside of a plastic body 62 and is in connection with an inside metal film 64 and an outer metal skin 60. Such a design having metal on the outside has poor protection against short circuiting between the uninsulated metal skin and a barrel.

None of Johnson, Grelle or Rolston cures any of the deficiencies of Burgess, as noted above. Johnson discloses a plastic case and a method of making the same. All of the embodiments of Johnson relate to a plastic case, some having a base of metal, as shown in Figs.

6, 8, 10 and 11, that will make them electrically conductive. The advantages mentioned in Johnson are concerned with weight, rapid production, ease of production, low cost, poor conductor of heat, etc. However, Johnson does not teach or suggest electrical insulation of a metal casing, as recited in the pending claims.

Grelle discloses an all-plastic cartridge. There is no teaching or suggestion in Grelle of the firing device (5) and cartridge case (2), as recited in claim 1.

Rolston discloses a method of making a casing. None of the disclosed embodiments of Rolston has a metal casing. Fig. 1 of Rolston has a metal ring 12 that is in contact with the weapon. The problems solved in Rolston are increased cost of brass and the risk of cartridge break in the breech. There is also no teaching or suggestion in Rolston of electrical insulation of a casing, as recited in the pending claims.

Based on the distinctions noted above, the cited references fail to teach or suggest the combination of elements recited in claim 1. Each of claims 2-16 depends on claim 1 and therefore incorporates all of the elements of claim 1, in addition to the further elements recited in claims 2-16. Hence, claim 2-16 are allowable at least because of their dependence on claim 1. Therefore, Applicants respectfully request that this rejection of claims 1-14 under 35 U.S.C. §102 be withdrawn.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 3-13, 15 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over any one of applicant's admission (hereinafter "APA"), U.S. Patent No. 6,397,508 to Constant (hereinafter "Constant"), U.S. Patent No. 6,360,469 to Mikuta (hereinafter "Mikuta") and U.S. Patent No. 5,301,448 to Petrick (hereinafter "Petrick") in view of Burgess. This rejection is respectfully traversed.

None of the cited references teaches or suggests "wherein the casing (10) including the bottom or the bottom piece (16) comprises one or more insulated or insulating shells, layers or surfaces (11, 12, 13) for, at least electrically, insulating both the casing (10) of the cartridge case (2) and its bottom or bottom piece (16) from the rest of the ammunition round (1) including its firing device (5) when the round (1) is stored and handled and, when the round (1) is used, from a barrel (14) of the weapon system" and "wherein the casing (10) of the cartridge case (2)

comprises a load-bearing case shell (11) in the form of a cartridge case (2) manufactured from an electrically conductive metal of which at least one inner or outer coating, surface or layer (12,13) is of dielectric material for the electric insulation of the cartridge case (2) in relation to the barrel (14) and also to the rest of the ammunition round (1) including the firing device (5) and the ammunition round (1),” as recited in claim 1. Therefore, Applicants respectfully request that this rejection of claims 1, 3-13, 15 and 16 under 35 U.S.C. §103 be withdrawn.

Disclaimer

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Office Action. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

CONCLUSION

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 20459-00394-US1 from which the undersigned is authorized to draw.

Dated: March 23, 2009

Respectfully submitted,

Electronic signature: /Arlene Neal/
Arlene Neal

Registration No.: 43,828
CONNOLLY BOVE LODGE & HUTZ LLP
1875 Eye Street, NW
Suite 1100
Washington, DC 20006
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant